

Work Order ID 53806

November 18, 2009 12:46:22 PM



Page 1

Item ID: D3564-9

Accept



Setup Start



Revision ID: D

Stop



Item Name: Wearshoe

Start Date: 18/11/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 25/11/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: RF

Date: 09-11-18

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3564

Rev D

100

0.00



FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D3564 ***** (D3564-1F) ***** ☒ Dwg Rev: D ☐ Prog
Rev: D ☐ 2-Deburr if necessary

B 9-11-19

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

B 9-11-19

120

0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

2) 809/11/19

conts

(+21)

/

(21)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 53806

November 18, 2009 12:46:22 PM



Page 2

Item ID: D3564-9

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Revision ID: D

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Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130



NC BRAKE

0.00

Brake NC

Memo

0.00

Brake NC

Deburr if necessary ☐ Form on Brake as per Dwg D3564 using Jigs DT 8129 and DT 8155 ☐ Form Joggle as per Dwg D3564 on brake using Jig DT 8157

8001/120

21

8

140



QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

Ensure joggle as per dwg D3429

801/123

121

1

150



Large Fab

0.00

Large Fab

Memo

0.00

Large Fab

Qty Description Batch ☐ A/R 2059B Hardcoat
M 112963 ☐ Weld hardcoat as per Dwg D3564

SP 09.12.02

21X

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 53806

November 18, 2009 12:46:22 PM



Page 3

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Item Name: Wearshoe

Start Date: 18/11/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 25/11/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC10- Inspect visual per QSI004- ground welds

0.00



27 S 01/12/02

QC

Memo

0.00

Quality Control



170

QC5- Inspect part completeness to step on W/O

0.00



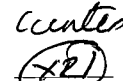
27 S 01/12/02

QC

Memo

0.00

Quality Control



180

Grey Sandtex(Ref:4.3.5.6) per QSI005.4.3

0.00



M 112588

0.00

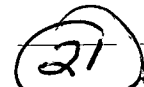
Powdercoat

Memo

Powder Coating

START TIME: 12:45 OVEN TEMPERATURE: 320° FINISH TIME: 12:15

BK 02-12-3



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 53806

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Page 4

Item ID: D3564-9

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Setup Start



Revision ID: D

Stop



Item Name: Wearshoe

Start Date: 18/11/2009 Start Qty: 20.00



Cust Item ID:

Required Date: 25/11/2009 Req'd Qty: 20.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

09/12/03

x21

0

Quality Control

200

Identify as per dwg & Stock Location: F219

0.00



Packaging

Memo

0.00

09/12/03

x21

0

Packaging

210

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

09/12/07

Quality Control

09/12/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng./ Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

November 18, 2009 12:46:28 PM

Page 1

Work Order ID: 53806



Parent Item: D3564-9RevD



Parent Item Name: Wearshoe

Start Date: 18/11/2009

Required Date: 25/11/2009

Comments:

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

M304S16GA

Purchased

No

100

sf

190.6742

23.1579

25.



18-11-19

304/316 Sheet .063

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

190.6741737

106860

16.018

111924

25.1689737

112442

29.8899

112567

0.2973

112885

119.3

10

112885

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	53804
Description: Wearshoe		Part Number:	D3564-9
Inspection Dwg: D3564 Rev: D		Page 1 of 1	

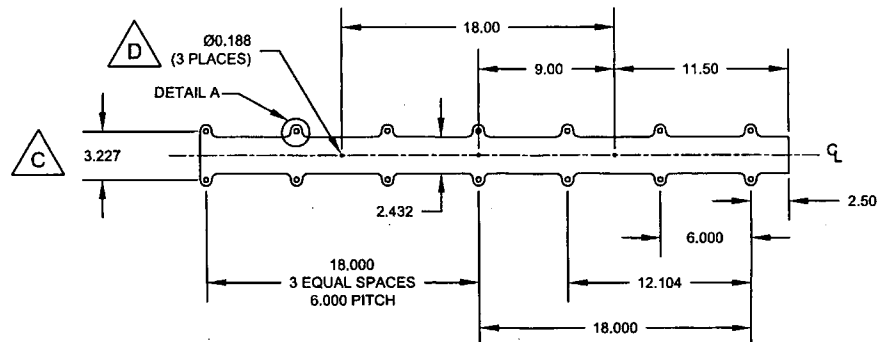
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

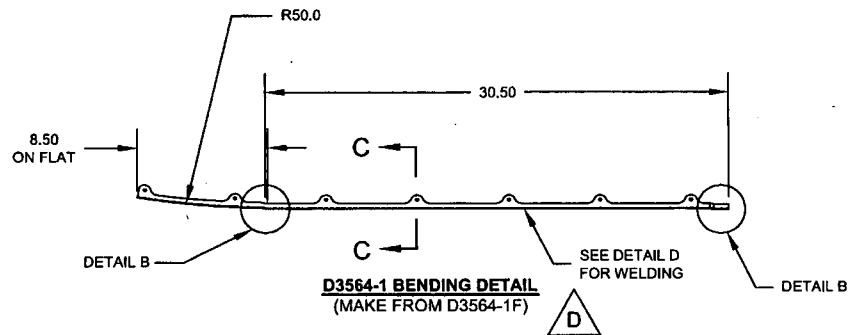
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.227	+/-0.010	3.230	X			
2.432	+/-0.010	2.435	X			
2.50	+/-0.030	2.500	X			
6.000	+/-0.010	6.000	X			
12.104	+/-0.010	12.104	X			
18.000	+/-0.010	18.000	X			
18.000	+/-0.010	18.000	X			
18.00	+/-0.030	9.00	X			
9.00	+/-0.030	11.50	X			
11.50	+/-0.030	307X304	A			
0.300 x 0.300	+/-0.010	.143	A			
Ø0.188	+0.005/-0.001	.375	X			
R0.375	+/-0.010	.375	X			
0.063	+/-0.010	.058	X			

Measured by:	VB	Audited by:	8	Prototype Approval:	N/A
Date:	9-11-16	Date:	09/11/19	Date:	N/A

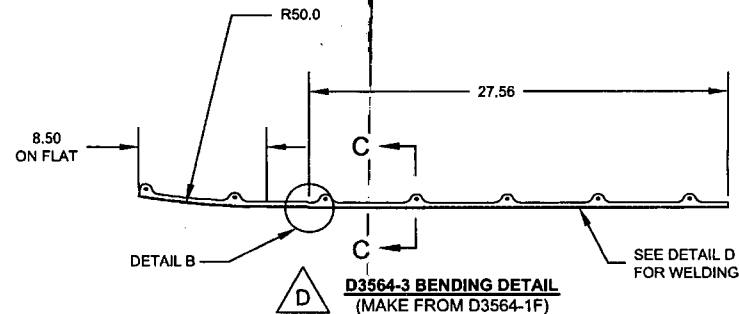
Rev	Date	Change	Revised by	Approved
A	08.01.16	New Issue	KJ/EC/DD	DD



D3564-1F FLAT PATTERN



D3564-1 BENDING DETAIL
(MAKE FROM D3564-1F)



D3564-3 BENDING DETAIL
(MAKE FROM D3564-1F)

D3564-1/-3/-5/-7/-9/-11/-13/-15 WEARPLATE NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 16 GAUGE (0.063 THICK)
(REF DART MATERIAL SPEC M304S16GA)
- 2) FINISH: POWDER COAT GREY SANTEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: SEE TABLE IN ZONE A3
- 8) WELD PER DART QSI 004
- 9) SEE PG 3 FOR SECTIONS AND DETAILS
- 10) PARTS ARE SYMMETRIC ABOUT C

WEIGHTS:	
D3564-1	1.85 lbs
D3564-3	1.85 lbs
D3564-5	1.93 lbs
D3564-7	1.26 lbs
D3564-9	1.85 lbs
D3564-11	1.85 lbs
D3564-13	0.38 lbs
D3564-15	0.80 lbs

SHOW COPY
RETURNED
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER NO. 53804
B109-1118

RELEASED

07.09.04 #

D	UPDATE DRAWING TEMPLATE; CHANGE ALL (TYP X PLS) TO (X PLACES); PG1 A8: UPDATE NOTES; PG1 A8, PG3 B5, C5: ADD D3564-15; PG1 B6, B3: D3564-1/-3 WAS ONE FIGURE; PG2 A7, A3: D3564-9/-11 WAS ONE FIGURE; PG2 A7, A3: D3564-9/-11 WAS ON PG1; PG3 B8, C8: D3564-13 WAS ON PG2; PG3 D2: WELDING DETAIL WAS ON PG1 PG3 A5, 7, B2: RELOCATE DETAILS AND SECTION; PG3 A5, 7, B2: INCREASE DETAIL AND SECTION SIZE	CB	07.08.21
C	MOVE TAB OUTBOARD, DETAIL A	PH	07.04.17
B	ADD AMS 5513 AND AMS 5524	PH	07.03.20
A	NEW ISSUE	PH	06.12.18
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	CB		
CHECKED	PH		
MFG. APPR.	PH		
APPROVED	PH		
DE APPR.	PH	DRAWING NO.	REV. D
		D3564	SHEET 1 OF 3
		TITLE	SCALE
		WEARSHOE	1:
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8

7

6

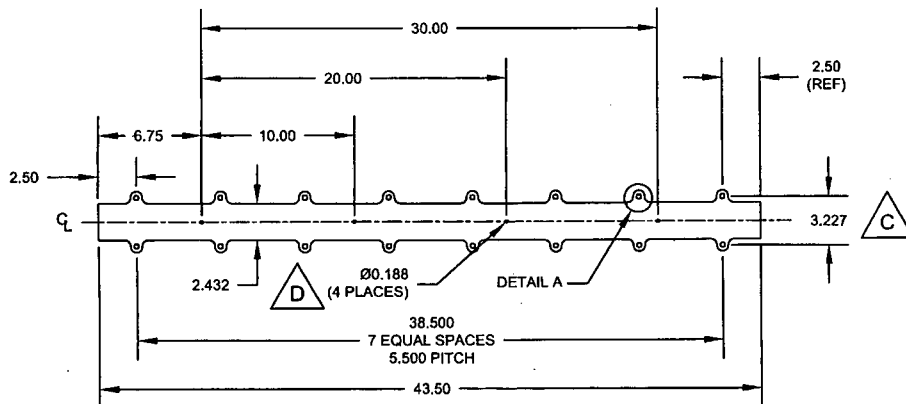
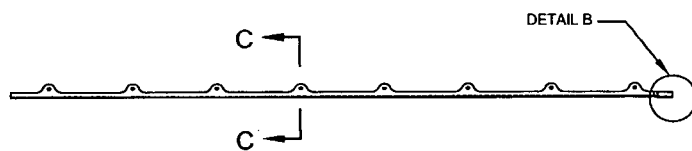
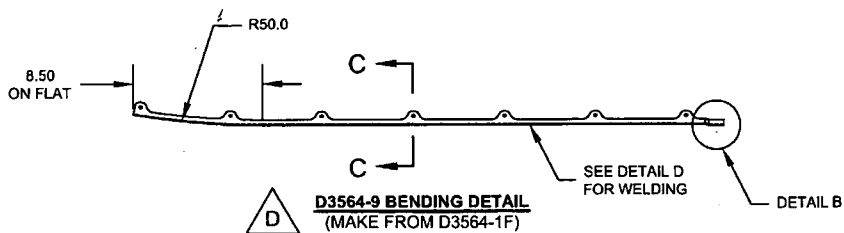
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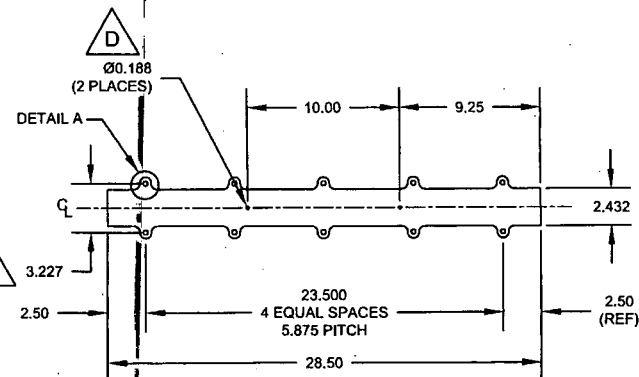
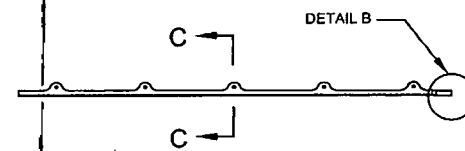
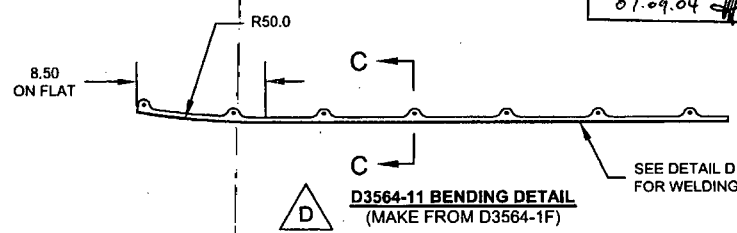
3

2

1

**D3564-5F FLAT PATTERN****D3564-5 BENDING DETAIL**
(MAKE D3564-5 FROM D3564-5F)**D3564-9 BENDING DETAIL**
(MAKE FROM D3564-1F)SEE DETAIL D
FOR WELDING

DETAIL B

**D3564-7F FLAT PATTERN****D3564-7 BENDING DETAIL**
(MAKE D3564-7 FROM D3564-7F)**D3564-11 BENDING DETAIL**
(MAKE FROM D3564-1F)**RELEASED**

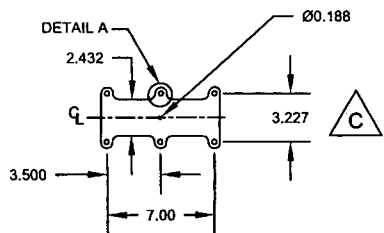
07.09.04

SEE DETAIL D
FOR WELDING

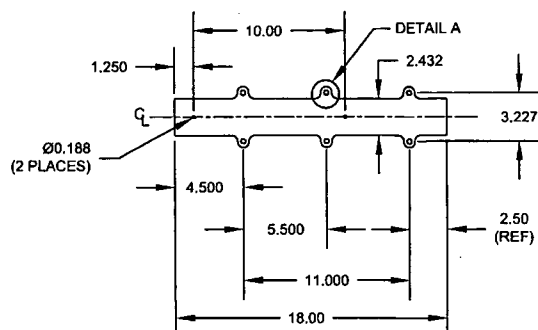
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DRAWN	CB		
CHECKED	PH	DRAWING NO.	REV. D
MFG. APPR.	PH	D3564	SHEET 2 OF 3
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	WEARSHOE	1:8
DATE	07.08.21	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/0 5380C

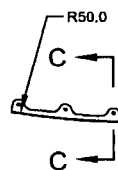
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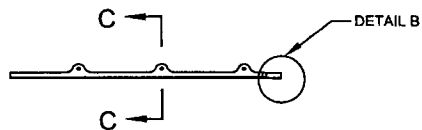
D3564-13F FLAT PATTERN



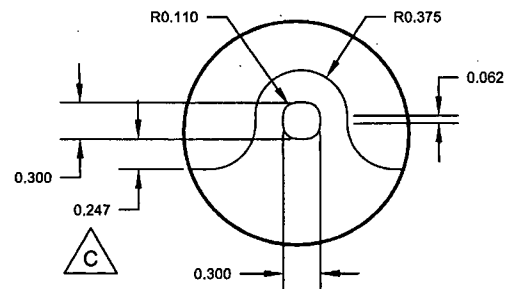
D3564-15F FLAT PATTERN



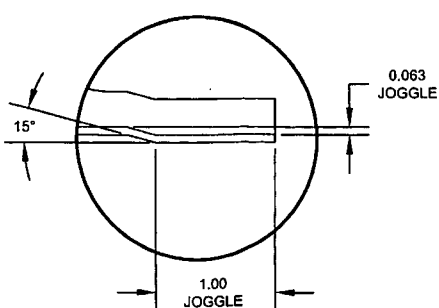
D3564-13 BENDING DETAIL
(MAKE D3564-13 FROM D3564-13F)



D3564-15 BENDING DETAIL
(MAKE D3564-15 FROM D3564-15F)

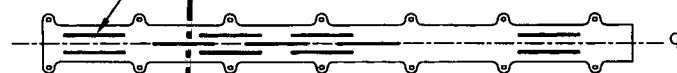


DETAIL A
SCALE 1:1



DETAIL B
SCALE 1:1

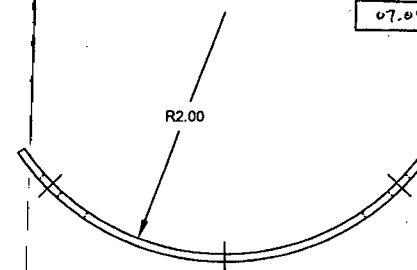
2059B HARDCOAT WELD 4.0 LONG 0.063 TO 0.125 HIGH
(11 PLACES)
WELD AFTER BENDING AS ILLUSTRATED PER DT8308



DETAIL D
(D3564-1/-3/-9/-11 WELDING DETAIL)

RELEASED

07.09.04



SECTION C-C
SCALE 1:1

W10 53806

DESIGN	PH	DART AEROSPACE LTD	
DRAWN	CB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. D
MFG. APPR.	PH	D3564	SHEET 3 OF 3
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	WEARSHOE	1:8
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8 7 6 5 4 3 2 1